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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,987	12/10/2001	Takayuki Nomoto	041514-5162	2829

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
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2656

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,987

Applicant(s)

NOMOTO ET AL.

Examiner

Aristotelis M. Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/2/05 has been entered.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the array of pits as well as the newly recited angular relationship must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1 and 3 are rejected under 35 U.S.C. 103 (a) as being obvious over WO 00/65584 and further considered with either JP 10-320835 or Watabe.

Although the examiner is relying upon the WO document, the examiner is only providing a copy of the US patent equivalent as an English translation of such a document

The following analysis is made:

Claim 1

WO 00/65584 (US 6512735)

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An optical disc

comprising an information recording layer
where information is recorded as an array
of pits at a predetermined track pitch, and
a light transmitting layer formed on said
information recording layer and having a
film thickness of 0.13 mm or less,

see abstract/title

see col. 1 line 19 -

the information recorded therein being
reproduced upon irradiation of a beam of
light having a wavelength ranging from
400 nm to 415 nm onto said information
recording layer through said light transmitting
layer from an objective lens having a numerical
aperture ranging from 0.75 to 0.86,

col. 2 line 4

wherein a taper angle of said pits is in a range
of 80 degrees to 90 degrees.

see secondary references

With respect to the wavelength, thickness and numerical aperture limitations of claim 1,
applicants' attention is drawn to the col. 1 line 29 to col. 2 lines 4, which discloses such limitations.

Although the document does describe a tapered angle range, the specified range is not
clearly depicted.

JP 10-320835 describes in this environment the ability of varying the tapered angle range
of the pit as necessary – see either the abstract, or the attached MAT (machine assisted translation) of
the JP document starting at paragraphs 17-19 for instance, and also starting at paragraph 46 – plus.

Alternatively, Watabe col. 6 lines 3-39 also depict a range that meets the claimed limitation.

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It would have been obvious to modify the base system with the teaching from either of the secondary references, motivation is as discussed in the secondary references.

With respect to the limitations of claim 3, such is considered inherently present –see the description of the tapered angle in the base reference for instance.

Response to Arguments

Applicant's arguments filed 8/2/5 have been fully considered but they are not persuasive. In particular, applicants' arguments focus on the newly introduced angular relationship in the tangential direction, i.e., that the prior art cited fails to depict an angular relationship in this direction.

Although the examiner agrees that there is no clear depiction of such, nevertheless the examiner concludes that such is present. As known, a pit has a physical manifestation in this environment, i.e., in both the tangential and radial direction. Both secondary references refer to the angular relationship of the wall of the pit. Hence the examiner concludes that both references do indeed teach the angular relationship of the wall of the pit does meet the newly introduced limitation.

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 3 above, and further in view of Sugaya et al.

Sugaya et al discloses in this environment the ability of having an angled tapered wall for the pits, as well as the establishment of the track pitch within the range cited.

It would have been obvious to modify the base system of the WO reference with the above teaching from Sugaya et al, motivation is to vary the track pitch accordingly in order to increase the recording density.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are not persuasive for the reasons stated above with respect to the parent claim.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 3 as stated above, and further in view of Sugaya et al.

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The limitations of claim 7 are drawn to the track pitch limitation already presented by claim 5.

Sugaya et al discloses in this environment the ability of having an angled tapered wall for the pits, as well as the establishment of the track pitch within the range cited.

It would have been obvious to modify the base system relied upon with respect to claim 3, motivation is as stated above with respect to claim 5 increase the recording density.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fukuoka et al – see discussion with respect to the angle of the pit.

Yamatsu et al, see the discussion wrt fig. 6 starting at col. 6 line 56.


Aratani et al, see the discussion with respect to figures 1 & 2, film thickness and reflectivity in this environment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
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AMP